XML Technologies

Practical Class 13

Exercise 1 (XML Schema)

xs:complexType
xs:complexContent
xs:extension
xs:restriction
xs:sequence
xs:element
xs:attribute

- Extend the XSD schema

- Introduce two new specific types of properties:

  - SKYSCRAPER

    - Extends property by adding a new attribute numberOfFloors

  - COTTAGE

    - Restricts property by removing features and ownerRef

Exercise 2 (XSLT)

xsl:for-each-group
xsl:sort
fn:current-grouping-key()
xsl:value-of
xsl:text
string-join(...)
concat(...)

- Extend the XSLT script

- Add a new unordered list of flat features

```
<h2>List of Features of Flats</h2>

<ul>

  <li><b>FEATURE</b>: FLATNAME@PROPERTYID, ... </li>

  ...

</ul>
```

- Use **xsl:for-each-group** for the aggregation

- Exploit **string-join(sequence, separator)** function and **XPath 2.0** extended expressivity of the / operator to compose individual lists of flat @property items

Exercise 3 (XQuery)

- Express the following XQuery query

- Integrate data about flats from two differently structured sources

- Use data-3.xml and data-3-flats.xml

```
<flats>

  <flat id="FLAT-ID" name="FLAT-NAME" property = "PROPERTY-ID" comfort="COMFORT-LEVEL" />

  ...

</flats>
```

- Order individual flats using their identifiers

Exercise 4 (XPath)

- Express the following XPath query

- Select distinct names of countries where owners reside

- Do not use distinct-values() function